

## USE OF TECHNOLOGY

### Legislation

Excerpts from Section 135 of the Carl D. Perkins III act:

(b) Funds made available to eligible recipients under this part shall be used to support vocational and technical education programs that—

(3) develop, improve, or expand the use of technology in vocational and technical education, which may include—

- (A) training of vocational and technical education personnel to use state-of-the-art technology, which may include distance learning;
- (B) providing vocational and technical education students with the academic, and vocational and technical, skills that lead to entry into the high technology and telecommunications field; or
- (C) Encouraging schools to work with high technology industries to offer voluntary internships and mentoring programs

### Definitions

**Technology:** the systematic application of knowledge, materials, tools and skills to extend human capabilities (Michigan Technology Education Curriculum Guide, 1998).

**High Technology:** Technology involving highly advanced or specialized (state-of-the-art) systems or devices.

**Telecommunications:** The science and technology of sending messages by electrical or electronic means.

### Guidelines

Recipients of Perkins funds must allocate funds to develop, expand or improve the use of technology in approved vocational and technical education programs.

This may include training vocational and technical education personnel to use state-of-the-art technology, developing or expanding partnerships with high technology industries to offer internships and mentoring programs or other activities that provide career and technical education students with skills required for entry into high technology and telecommunications fields.

A key aspect of preparing students for ‘high technology’ careers requires knowledge of the state-of-the-art in a field. Recipients should demonstrate that the activities proposed under “Use of Technology” have been developed in consultation with specialists in the field. These experts may come from local businesses or industries or may be consultants in specialized or advanced industries, including telecommunications industries. The purpose is to ensure that education personnel and students are trained to use the most advanced equipment, techniques and processes required by employers in their fields.

### **Uses of technology**

Uses of technology in the CTE setting include a) developing the skills necessary to operate various technologies, b) applying these skills in searching for knowledge and information and c) applying developed skills in the real-world contexts of business and industry.

### **Examples of high technology**

Determination of whether skills, equipment or systems qualify as ‘high technology’ requires input from specialists in the field in question. Examples of high technology may include computers, computer programs, digital imaging devices, input/output systems and equipment, transmitting/receiving systems and equipment, storing/retrieval systems and equipment, computer-assisted drafting, computer-assisted machining (CAD/CAM), innovations in medical technologies, telemedicine, genetic therapeutics, biotechnology, artificial ecosystems, distance learning and other innovative or ‘cutting edge’ technologies.

Funds budgeted under ‘Use of Technology’ may be used for:

- (a) Adopting standards or requirements for skills needed in high technology careers.
- (b) Developing policies regarding training career and technical education teachers in technology.
- (c) Consultation with industry specialists or advisors regarding skill requirements in high technology fields.
- (d) Development or modification of courses or curriculum to incorporate high technology knowledge and skill acquisition for career and technical education students, develop technology-related instructional goals for career and technical education courses.
- (e) Acquisition of state-of-the-art equipment or servicing, maintaining or upgrading equipment for use in providing career and technical education students with the academic and technical skills required for entry into high technology and telecommunications fields.
- (f) Development and support of partnerships with high-technology industries to offer internships, job shadowing and mentoring programs to career and technical education students.
- (g) Professional development for career and technical education personnel to train them in the use of state-of-the-art technology, including pedagogical uses of technology such as distance learning, web-based learning or integrating computer use into classroom instruction.
- (h) Summer internships for teachers to learn about the latest developments in high technology or telecommunications fields.

Funds may not be used for:

- (a) Infrastructure costs, such as hard wiring or server purchase
- (b) Telecommunication devices (except if used exclusively for student instruction).
- (c) Any cost not related to a state-approved career and technical education program

Resources:

Ameritech Technology Academy ([www.ameritechacademy.org](http://www.ameritechacademy.org))  
Perkins III Planning Guide for Approved Secondary Career and Technical Education Programs  
2000-2004, section M  
Michigan Technology content standards and benchmarks  
Standards for Technological Literacy: Content for the Study of Technology (National Science  
Foundation, ©2000)